



U.S. Department of Transportation

Federal Aviation Administration

# Airworthiness Concern Sheet

Date: July 23, 2019

<p><b>Reply to:</b>  Name: Dan McCully  Title: ASE -  Airframe Office:  Atlanta ACO  Department: FAA  Street Address: 1701 Columbia Ave City, State, ZIP: Atlanta, GA, 30337 Telephone: (404)474-5548  Email: <a href="mailto:william.mccully@faa.gov">william.mccully@faa.gov</a></p>	<p><b>Make:</b> FS 2000 Corp, FS 2001 Corp, FS 2002 Corp, FS 2003 Corp, LAVIA ARGENTINA S.A. (LAVIASA), Piper Aircraft, Inc.  <b>Model / Series:</b> See Table 1  <b>Serial Numbers:</b> See Table 1</p> <p><b>Reason for Airworthiness Concern:</b> AD 93-10-06 was issued to address an unsafe condition caused by corrosion in wing lift struts. AD 93-10-16 was superseded by AD 99-01-05, and AD 99-01-05 was revised in 2014 to correct the list of affected aircraft. AD 99-01-05 R1 was superseded by AD 2015-08-04 which added airplane models to the effectivity. AD 99-26-19 also relates to this subject. The subject ADs require a repetitive inspection of the wing lift struts either by ultrasonic methods contained within the AD or by the use of a Maule fabric tester as outlined in Piper Service Bulletins 528D or 910A, as applicable. The AD also provides options for terminating the repetitive inspections by installing certain sealed wing struts as specified in the AD. The FAA is concerned that the Maule fabric test method of evaluating remaining material thickness is unreliable. A recent post-accident test of a failed unsealed wing strut by Transport Canada failed to produce reliable results when using the Maule fabric tester method. A similar test conducted by the FAA did not produce consistent results when using the Maule fabric tester method. It should be noted that the failed unsealed strut in question exhibited significant internal corrosion but had no record of having been inspected in accordance with the abovementioned ADs. The FAA is seeking more information regarding the number of remaining unsealed wing lift struts in current use.</p>
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**Federal Aviation Administration (FAA) Description of Airworthiness Concern**

**Request for Information**

The FAA is requesting the following information from owners and operators of the models and serial numbers listed in Table 1. Additionally, owners and operators of other aircraft not in the applicability table who have used these methods are encouraged to provide any pertinent information.

- 1) Do you currently have sealed wing lift struts installed on your aircraft that constitute terminating action for the above AD(s) (Yes / No)?
  - If the answer to question 1) was 'Yes':
    - a. Were the wing struts replaced as a result of corrosion damage detected during the accomplishment of one of the abovementioned ADs? (Yes / No / Unknown)
    - b. If the answer to question 1) a. was 'Yes', which inspection method detected the corrosion (Visual / Maule test / Ultrasonic / Unknown)?
  - If the answer to question 1) was 'No':
    - c. Which method(s) of inspection have you used to comply with the repetitive inspection requirements of AD 2015-08-04 (Maule test / Ultrasonic)?

2) Can you provide any additional information regarding the use and effectiveness of the Maule tester inspection method that would assist the FAA in evaluating further action?

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owners/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve Airworthiness Directive (AD) action or a Special Airworthiness Information Bulletin (SAIB), or the FAA could determine that no action is needed at this time. The FAA's final determination will depend in part on the information received in response to this ACS.

The FAA endorses dissemination of this technical information to all manufacturers and requests association and type club comments.

<b>Attachments:</b> <input type="checkbox"/> Service Difficulty Report <input type="checkbox"/> Accident/Incident Data System <input checked="" type="checkbox"/> Service Letter / Bulletin <input type="checkbox"/> Special Airworthiness Information Bulletin <input type="checkbox"/> Federal Aviation Administration or National Transportation Safety Board Safety Recommendation <input type="checkbox"/> Airworthiness Directive <input type="checkbox"/> Alternate Means of Compliance <input type="checkbox"/> Risk Analysis <input checked="" type="checkbox"/> Other: AD 2015-08-04	<b>Transmittal:</b> <input type="checkbox"/> Federal Aviation Administration <input checked="" type="checkbox"/> Airplane Owners and Pilots Association <input checked="" type="checkbox"/> Experimental Aircraft Association <input checked="" type="checkbox"/> Type Club <input type="checkbox"/> Type Certificate Holder <input checked="" type="checkbox"/> Other: GAMA	<b>Response Requested By:</b> <input type="checkbox"/> Emergency (10 days) <input type="checkbox"/> Alert (30 days) <input checked="" type="checkbox"/> Information (90 days)
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Type certificate holder	Aircraft model	Serial Nos.
FS 2000 Corp	L-14	All.
FS 2001 Corp	J5A (Army L-4F), J5A-80, J5B (Army L-4G), J5C, AE-1, and HE-1	All.
FS 2002 Corporation	PA-14	14-1 through 14-523.
FS 2003 Corporation	PA-12 and PA-12S	12-1 through 12-4036.
LAVIA ARGENTINA S.A. (LAVIASA)	PA-25, PA-25-235, and PA-25-260	25-1 through 25-8156024.
Piper Aircraft, Inc	TG-8 (Army TG-8, Navy XLNP-1)	All.
Piper Aircraft, Inc	E-2 and F-2	All.
Piper Aircraft, Inc	J3C-40, J3C-50, J3C-50S, J3C-65 (Army L-4, L-4B, L-4H, L-4J, Navy NE-1 and NE-2), J3C-65S, J3F-50, J3F-50S, J3F-60, J3F-60S, J3F-65 (Army L-4D), J3F-65S, J3L, J3L- S, J3L-65 (Army L-4C), and J3L-65S	All.
Piper Aircraft, Inc	J4, J4A, J4A-S, and J4E (Army L-4E)	4-401 through 4-1649.

Piper Aircraft, Inc	PA-11 and PA-11S	11-1 through 11-1678.
Piper Aircraft, Inc	PA-15	15-1 through 15-388.
Piper Aircraft, Inc	PA-16 and PA-16S	16-1 through 16-736.
Piper Aircraft, Inc	PA-17	17-1 through 17-215.
Piper Aircraft, Inc	PA-18, PA-18S, PA-18 "105" (Special), PA-18S "105" (Special), PA-18A, PA-18 "125" (Army L-21A), PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", PA-18A (Restricted), PA-18A "135" (Restricted), and PA-18A "150" (Restricted)	18-1 through 18-8309025, 18900 through 1809032, and 1809034 through 1809040.
Piper Aircraft, Inc	PA-19 (Army L-18C), and PA-19S	18-1 through 18-7632 and 19-1, 19-2, and 19-3.
Piper Aircraft, Inc	PA-20, PA-20S, PA-20 "115", PA-20S "115", PA-20 "135", and PA-20S "135"	20-1 through 20-1121.
Piper Aircraft, Inc	PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, and PA-22S-160	22-1 through 22-9848.
Piper Aircraft, Inc	J-3	1100 through 1200 and 1999 and up that were manufactured before October 15, 1939.
Piper Aircraft, Inc	J3C-65 (Army L-4A)	All.
Piper Aircraft, Inc	J3P	2325, 2327, 2339, 2340, 2342, 2344, 2345, 2347, 2349, 2351, 2355 and up that were manufactured before January 10, 1942.
Piper Aircraft, Inc	J4B	4-400 and up that were manufactured before December 11, 1942.
Piper Aircraft, Inc	J4F	4-828 and up.